## REMARKS

Claims 1, 4, and 5 are pending in this Application. Claim 1 has been amended. Care has been exercised to avoid the introduction of new matter. Indeed, adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure. Applicants submit that the present Amendment does not generate any new matter issue.

**Claims 1, 4 and 5 were rejected under the first paragraph of 35 U.S.C. § 112 for lack of adequate descriptive support.**

In the statement of the rejection the Examiner asserted that the recited increment in warp constitutes new matter, because it encompasses increments not disclosed.. This rejection is traversed.

In rejecting a claim under the first paragraph of 35 U.S.C. §112 for lack of adequate descriptive support, the Examiner is charged with the initial burden of establishing that one having ordinary skill in the art would not have **reasonably recognized** from the originally filed disclosure that Applicants had possession of the now claimed invention. *In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).* That burden is not discharged by merely asserting a lack of *ipsis verbis* support in the specification for claim language. *Wang Laboratories, Inc. v. Toshiba Corp., 993 F2d 858 26 USPA2d 767 (CAFC 1993).* Rather, the issue generated by a rejection under the first paragraph of 35 U.S.C. §112 for lack of adequate descriptive support is whether the **concept** embodied in a claim was originally disclosed *In re Anderson, 471 F.2d 1237, 176 USPQ331 (CCPA 1973).* It has been repeatedly held that the written description requirement does **not** require Applicants to describe **exactly** the subject matter claimed. Rather, the disclosure should be sufficient to allow one having ordinary skill in the art to recognize that

Applicants invented what is now claimed. *Union Oil Co. of California v. Atlantic Richfield Co., 208 F3d 989, 54 USPQ2d 1227 (Fed. Cir. 2000)*; *In re Gosteli 872 F2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).*

Based upon above legal tenets, it should be apparent that the Examiner did not establish a *prima facie* basis to deny patentability to the claimed invention under the first paragraph of 35 U.S.C. § 112 for lack of adequate descriptive support, because the wrong legal standard has been applied. The Examiner has not even attempted the resolve the issue of what the originally filed disclosure would have conveyed to one having ordinary skill in the art. Applicants submit that this rejection is not viable for this reason in addition to the reasons argued *infra*.

The written description of the specification clearly conveys to one having ordinary skill in the art that the present invention reduces the increment in warp after a heat treatment. Indeed, in Table 2 on page 20 of the written description of the specification, noting with particularity sample Nos. 1 through 21, various values for the increment and warp after heat treatment up to $2.0 \times 10^{-2}$ μm/mm are disclosed. Therefore, one having ordinary skill in the art would have recognized that at the time of the present invention Applicants had possession of and invented the now claimed aluminum nitride ceramic based material having an increment in warp after a single heat treatment of not more than the recited value.

Applicants, therefore, submit that the imposed rejection of claims 1, 4 and 5 under the first paragraph of 35 U.S.C. § 112 for lack of adequate descriptive support is not factually viable and, hence, solicit withdrawal thereof.

**Claim 1 was rejected under the second paragraph of 35 U.S.C. § 112.**

In the statement of the rejection the Examiner identified a manifest typographical oversight in claim 1, which has been corrected by the present Amendment. The Examiner also asserted that claim 1 fails to set forth the temperature at which the heat treatment occurs which, according to the Examiner, would be required to give the limitation any meaning. This rejection is traversed as legally erroneous.

Firstly, it is Applicants' prerogative to define what they regard as their invention – it is not within the province of the Examiner. *In re Ehrreich, 590 F.2d 902, 200 USPQ 504 (CCPA 1979)*; *In re Borkowski, 422 F.2d 904, 164 USPQ 642 (CCPA 1970)*. In this respect Applicants would stress that inclusion of the heat treatment in claim 1 is not necessary to particularly point out what Applicants, repeat what Applicants, regard as their invention.

As one having ordinary skill in the art would have been aware, in accordance with conventional practices, a heat treatment is performed after sintering. The particular heat treatment would depend, of course, upon the precise composition. **Whatever** the heat treatment is for the **particular composition**, the aluminum nitride ceramic base material would have an increment in warp after that heat treatment as recited in claim 1, as one having ordinary skill in the art would have understood.

Further, the Examiner's conclusory statement with respect to the temperature does not meet the judicial test as previously argued in the Amendment submitted July 5, 2005. Specifically, consistent judicial precedent holds that **reasonable precision** in light of the particular subject matter involved is all that is required by the second paragraph of 35 U.S.C. § 112. *Zoltek Corp. v. United States*, 48 *Fed. Cl. 240, 57 USPQ2d 1257 (Fed. Cl. 2000)*; *Miles Laboratories, Inc. v. Shandon, Inc., 997 F.2d 870, 27 USPQ2d 1123 (Fed. Cir. 1993)*; *North*

*American Vaccine, Inc., v. American Cyanamid Co., 7 F.3d 1571, 28 USPA2d 1333 (Fed. Cir. 1993)*; *U.S. v. Telectronics Inc., 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988)*; *Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231USPQ (Fed. Cir. 1986).* It is not apparent and the Examiner did not explain **why** one having ordinary skill in the art would have been confused as to the scope of the claimed invention because the heat treatment temperature is not recited, upon construing the claim reasonably in light of and consistent with the written description of the specification, which is the judicial standard. *Miles Laboratories, Inc. v. Shandon, Inc., supra.* As recently confirmed by the Court of Appeals for the Federal Circuit, only claims "not amendable to construction" or "insolubly ambiguous" are indefinite. *Datamize LLC v. Plumtree Software Inc., ___ F.3d___, 75 USPQ2d 1801, 1804 (Fed. Cir. 2005).*

Based upon the foregoing Applicants submit that the imposed rejection of claim 1 under the second paragraph of 35 U.S.C. § 112 is not legally viable and, hence, solicit withdrawal thereof.

**Claims 1, 4, and 5 were rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by, or alternatively, under 35 U.S.C. § 103 for obviousness over Harris '261, Chiao, Yasumoto et al., Sugiura et al. and JP '265, each taken alone.**

This rejection is traversed.

Independent claim 1 has been amended to clarify that the claimed aluminum nitride ceramic base material is produced by sintering with a setter made of a high melting-point permeable metal or ceramic. It is not apparent wherein any of the applied references discloses or suggests such a setter. The use of a setter as recited is linked to the advantageous properties of the claimed aluminum nitride ceramic based material, which advantageous properties are also

recited in claim 1. These properties include the **uniformity of sintering agents (a/b) and increment in warp after a single heat treatment of not more than 2.0 x $10^{-2}$µm/mm.** In addition, none of the applied references discloses or suggests the properties of the claimed aluminum nitride ceramic based material, notably the uniformity of sintering agents and increment in warp. This is not surprising, since none of the applied references, taken singly or in combination, recognize, disclose or address the problem of increment and warp after heat treatment, much less that it is related in any way to the uniformity of sintering agents (a/b), as recited in independent claim 1.

Given the above **differences** between claim 1 and each of the applied references, Applicants stress that one having ordinary skill in the art would not have been led by the applied prior art to the present invention, i.e., the applied prior art does **not place the claimed invention into the possession of the public**. *In re Paulsen, 30 F.3d 1475, 31 USPQ2d 167 (Fed. Cir. 1994)*. The doctrine of inherency is not an elastic band which can be stretched to encompass any claim limitation. As previously argued of record, inherency requires **certainty**, not speculation. *Crown Operations International Ltd. v. Solutia Inc., 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002)*; *Finnegan Corp. v. ITC, 180 F.3d 1354, 51 USPQ2d 1001 (Fed. Cir. 1999)*; *In re Robertson, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999)*; *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc., 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994)*; *In re Rijckaert, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993)*; *Continental Can Co. USA, Inc. v. Monsanto Co., 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991)*. On the other hand, there is a basis upon which to predicate the conclusion that the doctrine of inherency is not applicable in the present situation and that none of the applied references discloses or suggests the claimed invention, much less put the claimed invention into the possession of the public.

**Evidence Undermining Inherency**

Adverting to Table 2 on page 20 of the written description of the specification, each and every sample in accordance with the present invention having a uniformity of sintering agents a/b less than or equal to 1.3, as specifically recited in claim 1, exhibited an increment and warp after a single heat treatment of no greater than $2.0 \times 10^{-2}$ um/mm. However, comparative examples 22 through 25 exhibited an increment in warp greater than that specified in claim 1, and these samples had a ratio a/b greater than 1.3. While comparative examples 28 and 29 had a low increment in warp, the samples exhibited totally unsatisfactory warp after sintering.

The data clearly establish that the reduced increment in warp after heat treatment, as specified in independent claim 1, does not just happen by chance, as evidenced by comparative example 22, 23, 24 and 25. Neither does the advantageously low warp after sintering. Rather, Applicants **discovered** that the reduced increment in warp after heat treating and as well as warp after sintering are linked to the uniformity of sintering agents as specified in independent claim 1. **Thus, Applicants have specified not only the ratio a/b but also have quantified the maximum in warp after heat treatment linked to the uniformity of sintering agents.**

As previously pointed out, the increment in warp after heat treatment is **not a problem recognized** by the any of the applied references. Neither is the significance of the uniformity of sintering agents. Clearly, none of the applied references recognized the **nexus** between the uniformity of sintering agents and increment in warp. The possibility that one having ordinary skill in the art might **stumble** into the claimed invention is not a basis for defeating the patentability of the claimed invention. *W. L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983)*; *In re Oelrich, 666 F.2d 578, 212 USPQ 323 (CCPA*

*1981).* The prior art simply **does not** put the claimed invention into the knowing possession of the public. *In re Paulsen, supra.*

As pointed out in the first full paragraph on page 10 of the written description of the specification, the use of a **permeable, high melting-point metal or ceramic, setter** enables the recited uniformity of the sintering agents and the advantageous properties of the claimed article. These claim limitations coupled with the evidence in the specification creates a formable barrier impenetrable to the doctrine of inherency which requires, again, **certainty**. *Continental Can Co. USA, Inc. v. Monsanto Co., supra.*

Based upon the foregoing it should be apparent that a *prima facie* basis to deny patentability to the claimed invention under 35 U.S.C. § 102 has not been established for lack of the requisite factual basis. Moreover, there is no factual basis upon which to predicate the conclusion that one having ordinary skill in the art would have been realistically motivated to modify any of the articles disclosed in the applied references to arrive at the claimed invention absent, of course, improper reliance upon Applicants' disclosure. *Panduit Corp. v. Dennison Mfg. Co., 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985).*

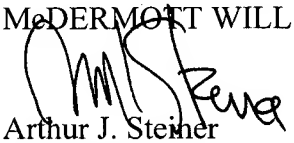
Applicants, therefore, submit that the imposed rejection of claims 1, 4 and 5 under 35 U.S.C. § 102 for lack of novelty, or alternatively, under 35 U.S.C. § 103 for obviousness predicated upon Harris '261, Chiao, Yasumoto et al., Sugiura et al. and JP '265, each considered alone, is not factually or legally viable and, hence, solicit withdrawal thereof.

Based upon the foregoing it should be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



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